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AUTHOR Kleinfeld, Judith S.; And Others
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ABSTRACT

The report describes the educational programs that Alaska's 162 small rural high schools offer, identifies educational problems, and examines strategies that districts and schools have devised to strengthen these schools. The schools mostly serve Eskimos and American Indians, have fewer than 100 students, and are located in communities of fewer than 1,000 residents. Information was obtained through telephone interviews, mailed surveys, site surveys of 32 randomly selected schools, achievement test scores, and in-depth studies by educators. Findings indicate: (1) most communities want village high schools as well as boarding school options; (2) replacement of boarding schools with village high schools has resulted in dramatically increased graduation rates; (3) high school size does not determine the quality of students' educational experiences or achievement on standardized tests; and (4) schools that are working well exhibit a strong teacher/community partnership, teacher/community agreement on a theme for the educational program, an enterprising teaching staff, and a central office that encourages adapting schooling to local needs. Successful strategies are described for problems in the areas of increasing course and teacher variety, providing vocational education, preparing students for college, raising achievement test scores, teaching students about the outside world, and helping rural students through the transition to adulthood. (NEC)

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ALASKA'S SMALL RURAL HIGH SCHOOLS

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JUDITH S. KLEINFELD, G. WILLIAMSON MCDIARMID
AND DAVID HAGSTROM

Appendix I: Edition

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ALASKA'S SMALL RURAL HIGH SCHOOLS

ARE THEY WORKING?

Judith S. Kleinfeld, G. Williamson McDiarmid,
and David Hagstrom

ABRIDGED EDITION

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Center for Cross-Cultural Studies

Judith S. Kleinfeld is a professor of educational psychology, and G. Williamson McDiarmid is an assistant professor of education; both are with the University of Alaska's Center for Cross-Cultural Studies. David Hagstrom is an associate professor of education with the university's College of Human and Rural Development.

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ABSTRACT

Purpose

This report describes the educational programs that Alaska's small rural high schools offer, identifies educational problems these schools face, and examines the strategies that districts and schools have devised to strengthen these schools.

Methods

We defined a "small rural high school" as a high school with fewer than 100 students located in a community of fewer than 1,000 residents.

For each of Alaska's 162 small high schools, we gathered information by means of: (1) telephone interviews and mailed surveys conducted with 97 percent of small high school principals, (2) site visits to thirty-two small high schools randomly selected by size and region, (3) telephone interviews with over 90 percent of rural school board presidents, (4) collection of achievement test scores from 94 percent of small high schools, and (5) in-depth studies by Native and non-Native educators.

Major Findings

1. Most rural communities want the village high schools; at the same time, they also want some type of boarding school option.

2. As a consequence of replacing the boarding school system with the village high schools, graduation rates have increased dramatically.

3. The drop-out rate from village high schools is half the national average.

4. Some small high schools offer a high quality educational program well adapted to local circumstances and community priorities. Others are having serious problems.

5. The size of the high school does not determine the quality of the students' educational experience or their achievement on standardized tests. Other school characteristics are far more important.

6. Schools that are working well exhibit:

   - A strong partnership between teachers and the community.
   - Agreement between teachers and the community on a theme for the educational program.
   - An enterprising teaching staff.
   - A central office that encourages local professionals and the community to take the initiative in adapting schooling to local needs.

7. Districts and schools have developed many innovative strategies (described in the full report) to address the educational problems of rural adolescents in small high schools. These problems include: (1) limited variety of courses, teachers, and activities; (2) the lack of specialized vocational courses; (3) inadequate preparation for college; (4) low achievement test scores; (5) insufficient opportunities for rural students to become competent and confident in the world beyond their villages; and (6) difficulties in making the critical transition to adulthood after graduation.

TABLE OF CONTENTS

INTRODUCTION 1

Staying Home in a Small Village High School: The Tobeluk Agreement of Settlement 5
Do Small High Schools Provide a High Quality Education? 6

STUDY GOALS AND METHODS 9

Study Objectives 9
Definition of a Small Rural High School 9
Study Methods 10
Organization of Report 11

STUDY FINDINGS, PART I: MOST RURAL COMMUNITIES AND RURAL EDUCATORS WANT BOTH THE VILLAGE HIGH SCHOOLS AND A BOARDING SCHOOL OPTION 13

Advantages Seen in Small High Schools 13
Disadvantages Seen in Small High Schools 14

STUDY FINDINGS, PART II: SOME SMALL HIGH SCHOOLS ARE WORKING—AND SOME ARE NOT 19

Profiles of Schools That Are Working 24
Tundra High School 24
Highlands High School 25
Riverside High School 26
Profiles of Schools That Are Not Working 26
Fisherton High School 27
The Negative Culture of Schools That Are Not Working 27

STUDY FINDINGS, PART III: PROBLEMS EXIST BUT SO DO SOLUTIONS 29

Problem Area 1: Limited Numbers of Teachers, Courses, and Extracurricular Activities 29
The Issue 29
Strategies for Increasing Course and Teacher Variety 30
Problem Area 2: Providing Vocational Education 30
The Issue 30
Strategies for Providing Vocational Education 32
Problem Area 3: College Preparation 34
The Issue 34
Strategies to Prepare Students for College 34
Problem Area 4: Low Achievement Test Scores 35
The Issue 35
Strategies to Raise Achievement Test Scores 37
Problem Area 5: Helping Rural Students Become Competent in the World Outside the Village 38
The Issue 38
Strategies to Teach Students About the Outside World 38
Problem Area 6: The Transition to Adulthood 39
The Issue 39
Strategies to Help Rural Students Through the Transition to Adulthood 39

CONCLUSION 41

INTRODUCTION

In 1976, Alaska chose an approach to providing secondary education in remote rural villages that was at once very unusual and very conventional. Rather than sending students, mostly Eskimo and Indian, to boarding programs far from their homes, the state agreed to provide a high school in every village that wanted one.

Today, nearly a decade later, many people in the state are asking: Are the students in these small and expensive high schools receiving a high quality education? Do the advantages that these schools offer—proximity to family and community, tutorials, travel and other special programs—constitute a triumph for rural education? Or do the disadvantages—limited variety in teachers and courses, lack of teachers with specialized subject-matter knowledge, isolation, inadequate vocational or college preparation—condemn rural students to second-rate schooling?

To answer these questions, we need to understand the alternative to the small high schools. What kind of education did Alaska's former boarding school system offer village students? Below, we describe one student's experience with the state boarding program—an experience unfortunately common during the boarding school era:

Going to Anchorage for High School in 1971

Staying close to her cousin, Emily walked off the plane into the Anchorage airport, which was awhirl with white people. Coming from a village of 400 Yupik Eskimo, Emily had never seen so many people—so many white people—all at once.

The Boarding Home Program coordinator drove Emily to the split-level home in the suburbs where she was supposed to live for the school year. The waxed wooden floors gleamed, and fresh finger-towels hung in the guest bathroom. The family thought that having a teenage girl from another culture living with them would be exotic—and the boarding fees provided by the state would generate extra income.

Although she was a high school freshman, Emily's test scores showed that she read below the sixth grade level. Most village freshmen, the school district had found, could not do ninth grade work. In the classroom, these students huddled together in the back, unwilling to speak. Even some of the words bandied about in class—"suspension," "prom," "detention"—were totally new to them, although they dare not let on.

The district placed Emily and her cousin in the Rural Transition Center, a special program for village students held in a downtown store-front school. Emily studied English, mathematics, and social studies in a three-teacher school very similar to contemporary village high schools. The district hoped to transfer Emily to a large comprehensive high school for her sophomore year.

Emily did not do well at the school. "She could do much better," one teacher said. "There are times when she exhibits extreme industriousness and scholarship. But she doesn't seem interested or motivated—by me anyway." Her teachers did not realize just how homesick Emily was. They saw her as "sullen and moody much of the time."

Emily was also having problems at her boarding home. In the village she didn't need to tell her parents where she was going or when she would return. In the city, her boarding home parents insisted that they knew where she was at all times. Emily sometimes forgot. Soon she was transferred to another home.

Just after Thanksgiving Emily's second boarding home mother came into the program office distraught. She wanted to file a missing person's report. Emily had not come home the night before.

The Boarding Home Program coordinator finally located Emily at the Holiday Inn Motel. Emily told him that she had wanted to call her boarding home parents, but she couldn't figure out how to use the telephone in the motel room.

Despite her troubles, Emily wanted to stay in Anchorage. "I don't want to ruin my education," she said. Her cousin testified that Emily had never gotten into trouble at home.

Emily went home for Christmas and decided not to come back.

While we have changed all the identifying details, this is an actual case history of one village student who went away to high school in Anchorage in 1971. Although some students succeeded in the boarding home program, Emily's experience is not unusual.

In 1974 we followed the school careers of 105 village freshmen who entered three different types of boarding programs away from home: a boarding school, an urban boarding home program, and a rural boarding home program later replaced by a boarding school.[1] About *half* these students experienced *school-related* social and emotional problems.

[1]Judith Kleinfeld, *A Long Way from Home: Effects of Public High Schools on Village Children Away from Home* (Fairbanks, Alaska: Center for Northern Educational Research and Institute of Social, Economic, and Government Research, 1973).

Drop-out rates for these programs were high.[2] Almost 25 percent of the students left during their freshman year and others left during the summer. Only 46 percent made it through the first two years of any boarding program. While some of these boarding students left school altogether, most shuttled from program to program, discontented with each in turn.

These boarding programs presented students with a wide array of courses and teachers. Such educational opportunities did not, however, translate into substantial growth in achievement. During their *two years away* at boarding school, the village students we studied *gained less than one and a half years* in reading achievement and less than one year in language achievement.[3]

Not all boarding school situations produced high levels of social and emotional problems, high dropout, and low achievement. In the early 1960s, for example, Mt. Edgecumbe graduated rural students who scored almost at grade level on standardized achievement tests.[4] Many later distinguished themselves as leaders in the Alaska Native Claims movement. Admission to Mt. Edgecumbe was, however, selective during this period. In the early 1960s, the freshmen were reading almost at grade level when they initially entered the school.

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[2]The rates reported here are for the 105 students we followed for the 1973 study. In *A Long Way from Home*, we also reported drop-out rates for *all* village students who entered boarding programs in 1971 and 1972. Of the 1,724 students who entered boarding programs in 1971, 22 percent left during that year. Of the 1,561 students who entered the boarding programs in 1972, 34 percent left during the year. Most students did not drop out of school entirely but transferred from one program to the next. See *A Long Way From Home*, Appendix III, pp. 1-3.

[3]In the 1973 study, we gave the California Achievement Test to the 105 students we were following when they entered high school. We then gave them the same test at the end of their freshman and sophomore years, and measured change in grade level equivalents. We simply do not have the test data necessary to compare today's village high school students with the students who attended the boarding programs. Our point is, however, that the boarding schools did not produce a year's gain in achievement for each year in the program. See *A Long Way from Home*, Appendix IV, pp. 1-6.

[4]According to Mt. Edgecumbe records, graduating seniors in 1963 scored at the 11.2 grade level. Entering freshmen scored at the 8.2 grade level. In other words, over the four years of high school, students gained three grade levels.

Similarly, rural students who were mature and had strong educational backgrounds succeeded in the Anchorage Boarding Home Program. When such students graduated from the boarding home program, they sometimes attended highly selective universities and, generally, did well in college.

In short, boarding programs worked only for a minority of rural students. In our earlier 1973 study of boarding programs, we used the following criteria for success: (1) the student stayed in the program, (2) the student did not develop severe or moderately severe school-related social and emotional problems, and (3) the student gained half a year or more in reading achievement for the full school year. By these standards, only 23 percent of the 105 students that we followed succeeded during their freshman year.

Staying Home in a Small Village High School: The Tobeluk Agreement of Settlement

Today a student like Emily goes to a small high school in her home village. The legal mandate for these village high schools resulted from a lawsuit filed by Alaska Legal Services on behalf of 126 rural communities.

According to the decree that settled the case, the state of Alaska must provide a secondary program in every community that wants one, even if the community has only one high school student.[5]

In 1976, 110 of the 126 communities included in the original lawsuit chose to have a local high school.[6] Of the sixteen com-

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[5]The 1976 "Agreement of Settlement" in *Tobeluk v. Lind* (previously known as the Molly Hootch Case) has been incorporated into state law. The regulations state that a school district must provide a local secondary education if the local school committee wants one, if the community has an elementary school program, and if there is one or more children available to attend the secondary school (4 AAC 05.040).

[6]Personal communication from Stephen E. Cotton, formerly with Alaska Legal Services, July 20, 1984. Mr. Cotton has continued to monitor compliance with the *Tobeluk v. Lind* settlement agreement.

munities that originally declined the offer, ten later changed their minds.

By 1984, Alaska had spent nearly $143 million constructing high schools in small rural villages.[7] In some remote communities, the state spends more than $16,000 per year educating each high school student.[8]

Do Small High Schools Provide a High Quality Education?

Today a rural high school student like Emily attends a modern high school at home replete with personal computers, shop facilities, a gymnasium, and a library. Some have science labs, auto shops, computer labs, and similar amenities.

These schools have few students. Almost 60 percent of rural students attend a high school of forty students or less while nearly a quarter are in schools of twenty or less.

These schools usually have few teachers and can offer mostly a basic academic program. A high school of sixteen students, for example, may have only two certified teachers—one teaches English and social studies, while the other teaches math and science.

Because the school is small, these teachers may know each student well and understand the type of educational help they need. The teachers may have taken advantage of the flexibility small size offers to develop an educational approach tailored to the setting. They may have students research and write articles for a community newspaper as a way of teaching writing. They may have students learn to repair three-wheelers and outboard motors for community people as part of the vocational program. They

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[7]Information provided by the Alaska Department of Education, *Tobeluk v. Lind* Consent Decree, Facility Construction Facility Report, undated (circa 1984).

[8]Information provided by the Alaska Department of Education, Management, Law, and Finance Division. Foundation Funding, Small High Schools in Alaska, Revised Foundation Reports, 1984.

may arrange a class trip to Anchorage so students learn about urban survival skills and career and college opportunities. They may make creative use of tutorials, peer teaching, and computer-assisted instruction.

On the other hand, these two teachers, while imaginative in taking advantage of the opportunities offered by a small school, may not have the academic background to teach such subjects as chemistry or world history. Moreover, the school may have no art or music program. The school might be able to field a basketball team but offer few other extracurricular activities.

Certainly, these small high schools are safe, supportive environments. Indeed, some critics would contend that they are *too* safe. Teachers in small rural high schools are generally very solicitous of their students, and social relations tend to be more familial than formal. Students grow up, go to school, and graduate with the same small group of students.

Are rural students in these small high schools really receiving quality education? Did the state of Alaska make a mistake in agreeing to establish a high school program in every community that wants one?

These are the questions worrying Native leaders who want to raise educational standards. These questions also worry rural college students who find themselves unprepared for either the academic or social demands of college. These same questions worry rural teachers who wonder if they should send high achieving students away to a boarding school, even though the loss of these talented students would hurt the education of those staying at home. Finally, these questions worry state policymakers who wonder if the educational benefits of these schools are worth the enormous costs.

STUDY GOALS AND METHODS

Study Objectives

To address these large issues we attempted to answer specific empirical questions:

- What educational programs do Alaska's small rural high schools offer?
- What educational problems do these schools face?
- What strategies have educators devised to capitalize on the educational opportunities offered by small high schools and cope with the problems posed by small size, cultural differences, and remoteness?

Definition of a Small Rural High School

This study defines a small rural high school as one with fewer than 100 students, in grades nine through twelve, that is located in a rural community of fewer than 1,000 residents.

By this definition, about 3,700 rural students attended 162 small Alaska high schools in 1984.[9]

[9]We identified 162 small high schools in 1984. The total number of high schools shifts slightly each year since the smallest schools may or may not exist in a particular year depending on the number of students.

Most small high schools are located in remote Native villages. About 25 percent, however, enroll mostly white or a mix of white and Native students.

Not all the small high schools were created as a result of the Tobeluk lawsuit. Indeed, 36 of the 162 high schools existed long before the settlement decree. These high schools came into existence because non-Native rural communities used their knowledge of the political system to get funding for local high schools many years before Native communities.

Study Methods

Since rural high schools in Alaska are located in a wide variety of communities, educational strategies that work in one type of community may be inappropriate in another. For this reason we gathered information on the educational programs of *all* 162 small rural high schools.

Due to the generous cooperation of rural communities and rural educators, we have enjoyed exceptionally high response rates—typically greater than 90 percent.

We used five basic sources of information:

1. **Telephone interviews and mail-out surveys conducted with 97 percent of small high school principals.**

We asked principals (who were usually teachers as well) for detailed information about their small high school program, about problems, and about the ways they were addressing these problems.

2. **Site visits to thirty-two small high schools randomly selected by size and region.**

During site visits, we interviewed community school committee members, high school students, and school staff. We observed classes and collected a variety of other information—students' writing samples, graduation requirements, etc.

3. **Telephone interviews with over 90 percent of the school board presidents of rural districts with small high schools.**

Working with the Alaska Association of School Boards, we interviewed rural school board presidents on the strengths and weaknesses of small high schools and innovative educational strategies their districts were using.

4. **Collection of achievement test scores from 94 percent of small high schools.**

While we are well aware of the many problems inherent in using standardized tests with students in small, culturally different schools, we collected these scores because they are the commonly accepted measure of school achievement.

5. **In-depth studies of small high school issues by Native and non-Native educators.**

To obtain a richer view of community attitudes toward village high schools and other issues, we worked with seven Native and three non-Native educators on special studies of the high school situation in their own communities.

Organization of Report

This report consists of three sections. In the first, we present the views of rural educators and residents on local high schools and boarding school options.

The second section documents the effects of the small high schools on graduation rates and presents profiles of four representative schools, three that are working well and one that is not. We also offer some general observations about successful rural high schools.

Finally, we turn to the problems with small high schools that educators and community members have identified and the strategies that some schools have developed to address these problems.

STUDY FINDINGS, PART I:
Most Rural Communities and Rural Educators Want Both the Village High Schools and a Boarding School Option

Finding 1: Most rural communities and rural educators see significant advantages, as well as some disadvantages, to small rural high schools.

Rural residents and educators see significant advantages to small high schools. We summarize below the strong points they mentioned most frequently.

Advantages Seen in Small High Schools

1. *Children can grow up at home with their families.* Parents do not worry about whether their children, away at boarding schools, are unhappy or in trouble. Parents can follow the unfolding of their children's lives.

2. *In small high schools, children receive a great deal of individual help and attention from teachers who know them well.*

3. *In a small high school, children are participants, not spectators.* Almost everybody gets the chance to be on the basketball team or the yearbook staff. Rural children who might be on the sidelines in a large school occupy center stage in a small school.

4. *Small rural high schools offer students increased access to special educational opportunities, such as the chance to travel and lots of time on the computer.* About 90 percent of the schools offer travel outside rural Alaska. These schools average one computer for every four students.

5. *With the schools nearby, parents can exert considerable control over their children's education.* They can keep an eye on what is going on and take action informally as well as through formal membership on local or district boards.

6. *Local high schools enable communities to teach local cultural traditions, languages, and subsistence skills.* About 90 percent of Native-majority high schools offer instruction in cultural traditions, subsistence skills, and Native Land Claims issues. Over 60 percent have language programs designed to maintain Native languages.

7. *Local high schools provide such important community facilities and services as gymnasiums and workshops, spectator sports, newspapers, and community education programs.* Many small high schools serve as community centers and offer classes and recreation for adults as well as students. The schools also bring new jobs—on the average, three positions (such as teacher aide, secretary, or maintenance person)—in addition to professional teaching positions. They also stimulate such economic activities in the community as construction, transportation, and fuel oil sales.

Disadvantages Seen in Small High Schools

Rural residents and educators are well aware that small high schools have significant educational disadvantages. They emphasize that small high schools:

- *Offer little variety in courses and few advanced courses.*
- *Offer a limited number of extracurricular activities.*
- *Have few teachers.* The majority of teachers must instruct in subjects outside their specialization. If a teacher and a

student have a personality conflict, neither has the space to get away from the other.

- *Do not provide enough exposure to the world outside the village and do not provide enough challenge and competition.*

Finding 2: Despite the problems, most people we interviewed want small high schools to remain the backbone of the rural secondary school system.

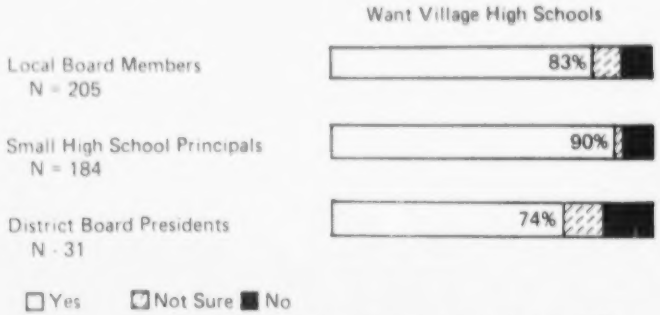
In each of the thirty-two communities we visited, local people support the village high school and do not want to lose it (Figure 1). Non-Native communities want their local high schools just as much as Native communities.

Finding 3: Most people want a boarding option as an alternative to the small rural high school.

When we began this study, we thought people would either want the village high school or, after experience with these schools, would advocate returning to a boarding school system. That is not what we found. The majority of community people and principals we interviewed want village high schools. At the same time, they also felt that rural students should have the option of attending a boarding program (Figure 2).

Figure 1

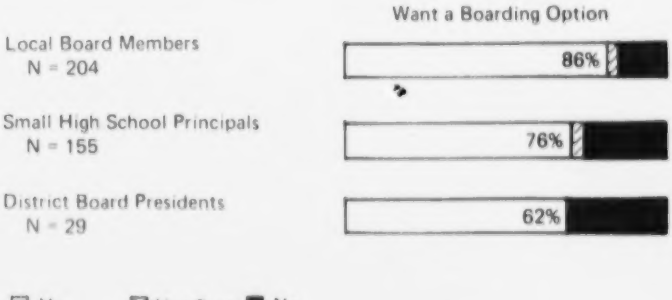
Most Rural Board Members and Principals Want Village High Schools



Source: ISER Small High School Survey, 1984.

Figure 2

Most Also Want a Boarding School Option



Source: ISER Small High School Survey, 1984.

Finding 4: Certain rural students need an alternative to the small high school.

According to rural educators and local people, the following kinds of students sometimes need an alternative to small high schools:

1. *Social referrals.* Occasionally, students have family or other nonacademic problems sufficiently serious to warrant leaving their communities to attend high school.

2. *Advanced students.* Students who are academically gifted cannot always be challenged sufficiently in small high schools. Students with a specific vocational interest may need special equipment or training not available in small high schools.

3. *Students who want more activities and social life.* Students who want to participate in athletics and other extracurricular activities or who want to socialize with a wider circle of peers often prefer a boarding school situation.

Finding 5: Some rural families make private arrangements to send their children to high school outside the community.

A few rural parents want their children to experience the emotional independence of living away from home or to have the educational opportunities offered by a larger high school. These parents typically arrange for their children to stay with relatives or family friends while they attend the larger school.

Where students are having problems in the family or community or need special programs, school districts sometimes arrange for them to go to school outside their community. These private arrangements are not widespread. About 20 percent of small high school principals said that some students in their communities are attending high school away from home.

Finding 6: While most people favor a boarding option, they are sharply divided on whether the state of Alaska should reopen Mt. Edgecumbe, a boarding school in southeast Alaska.

Advocates of reopening Mt. Edgecumbe as a statewide boarding school stress the need to provide rural students with an alternative to small high schools. They also stress Mt. Edgecumbe's historical importance in Native education and politics.

Opponents of Mt. Edgecumbe argue that reopening the school will be extremely expensive. Annual operating costs are currently estimated at $3.8 million for 175 students. In their view, the money could be better used to strengthen rural secondary education by other means, such as specialized itinerant teachers or summer college preparation programs on campus.

Reopening Mt. Edgecumbe, many fear, will drain money and talented students away from the small high schools and reduce the quality of education for the students who remain.

The State Board of Education decided to reopen Mt. Edgecumbe in 1985.

STUDY FINDINGS, PART II:
Some Small High Schools Are Working—and Some Are Not

Finding 1: Small high schools have greatly increased high school graduation rates among rural students.

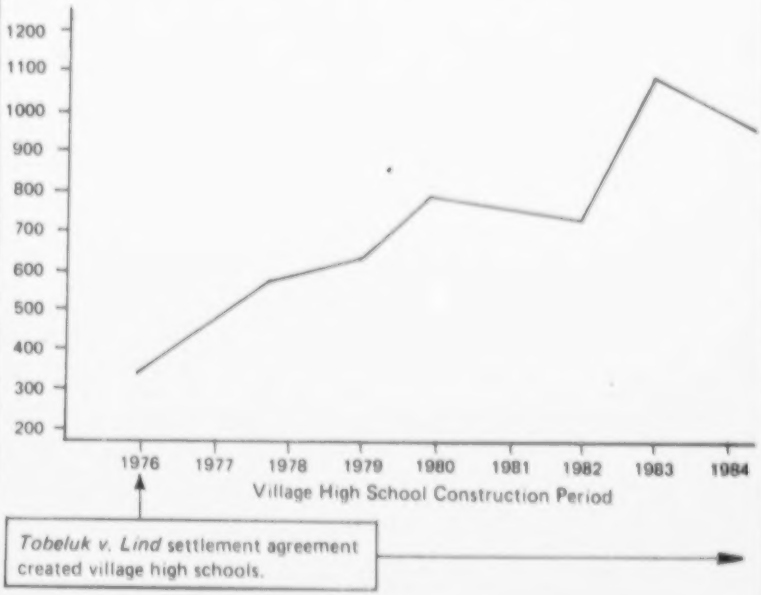
The most dramatic educational benefit of small local high schools is the increase in the number of rural students who graduate (Figure 3). The drop-out rate in Alaska's small rural high schools has now fallen to half the national average. The gap in graduation rates for Natives and non-Natives is closing, and the small high schools are responsible.

According to rural school board presidents and rural educators, village residents who have graduated from high school are more knowledgeable about schools, more interested in shaping the school program, and more likely to help their children do well in school. Rural Alaska communities with more high school graduates, we found, have higher achievement test scores.

In short, the greatest educational impact of the small high schools may be in their long-term effect: raising achievement in subsequent generations of rural students.

Figure 3

Village High Schools Have Increased the Number of Rural High School Graduates*



*This increase results from (1) very low drop-out rates in rural high schools, and (2) increased enrollment in rural high schools, rather than urban boarding programs away from home.

Source: Alaska Department of Education, 1984.

Finding 2: Recent national research questions the quality of education available in large comprehensive high schools and demonstrates the value of instructional methods suited to small high schools.

The large comprehensive high school, long the standard in American education, has recently become the target of considerable criticism.[10] With over 150 students each day, a teacher in a large school often cannot give students the individual attention necessary to develop their academic and intellectual skills. The tide of research, running for several decades in favor of large comprehensive high schools, has turned. Small schools characterized by a focused curriculum and more personal student-teacher relations appear to offer some distinct advantages.

In addition, the most effective approaches teachers can use to increase achievement test scores are particularly well suited to small high schools. Research has established tutorial instruction as the single most effective way to raise achievement test scores (Figure 4).[11] We frequently observed such one-to-one tutoring during our visits to small high schools.

Two of the most cost-effective supplemental methods available to teachers to increase achievement test scores—cross-age peer tutoring and computer-assisted instruction[12]—are also commonly used in Alaska's small high schools.

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[10]See, for example, Theodore Sizer, *Horace's Compromise: The Dilemma of the American High School* (Boston: Houghton Mifflin, 1984); Mortimer Adler, *The Paideia Proposal: An Educational Manifesto* (New York: Macmillan, 1982); Ernest C. Boyer, *High School: A Report on Secondary Education in America* (New York: Harper & Row, 1983); Theodore Sizer, David K. Cohen, and Eleanor Farrar, *The Shopping Mall High School* (Boston: Houghton Mifflin, 1985).

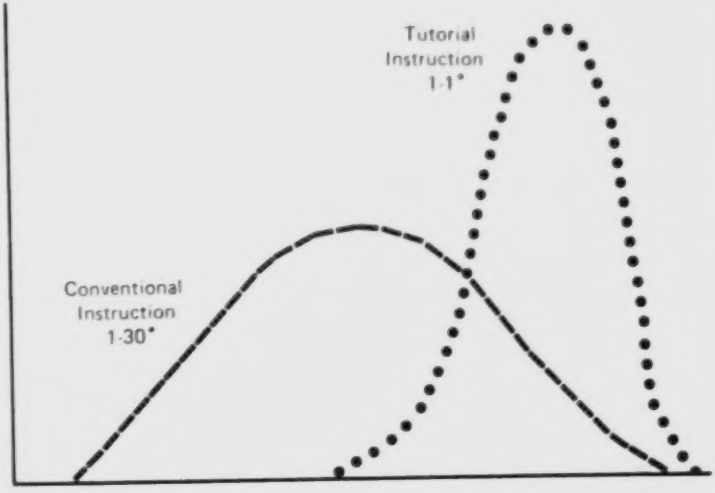
[11]Benjamin S. Bloom, "The 2-Sigma Problem: The Search for Methods of Group Instruction as Effective as One-to-One Tutoring," *Educational Researcher* (June/July 1984): 4-16.

[12]Henry M. Levin, Gene V. Glass, and Gail R. Meister, *Cost-Effectiveness of Four Educational Interventions* (Stanford University: Project Report No. 84-A11, 1984).

Figure 4

Tutorial Instruction Dramatically Increases Student Achievement

National Research Findings



Achievement Test Score Distribution

*Teacher-student ratio.

Source: "The 2-Sigma Problem: The Search for Methods of Group Instruction as Effective as One-to-One Tutoring," Benjamin S. Bloom, *Educational Researcher*, June/July, 1984, pp. 4-16.

In short, the most effective ways to raise achievement test scores—teacher-directed tutorials, peer tutoring, and computer-assisted instruction—are common educational methods in small high schools.

Finding 3: Some small high schools offer a high quality educational program well adapted to local circumstances and community priorities. Others are having serious problems.

We judged a small high school as "working well" when it had the following five characteristics:

1. A staff that has adapted the instructional program to local priorities and conditions.

2. High attendance and few dropouts.

3. Students who spent most of the school day on demanding academic tasks.

4. Community members who express support for the staff and the instructional program and feel welcome at the school.

5. Teachers who express enthusiasm for the school and see serious learning taking place.

Below we profile three schools that meet these criteria. Later we describe a school that is not working well. (Other examples of poor schools may be found in the complete report.)

We do *not* offer these schools as models of what every high school should be. Other high schools that work just as well look quite different. There are many ways to make small high schools work. Each community must develop a small high school program adapted to its own circumstances and priorities.

Tundra High School
(15 students, 1 part-time and 2 full-time teachers)

In Tundra Village, Yupik is still the first language of the people. Poor English language skills are the major impediment to academic progress. Therefore, the principal decided to focus instruction on language development: "Everything is geared toward the teaching of English and the support of Yupik." If students maintain a strong first language, he believes, teaching them a second language becomes much easier.

In accord with community priorities, the curriculum emphasizes the local language and local subject matter. At the same time, instruction stresses higher-order inquiry and thinking skills.

One school project, for example, involved an inquiry into how housing in the village has evolved in recent times. Students first interviewed members of a construction crew who were building new housing in the village. These interviews stimulated students to interview local elders about what housing had been like before contact with Westerners. This, in turn, led to a field trip to the remains of a traditional sodhouse nearby. Using the materials collected from all these sources, the students produced bilingual newspaper articles and a video program which was shown to villagers.

The principal found that a conventional schedule—seven forty-five-minute periods per day—did not suit such activities. So he adopted a schedule that features ninety-five-minute blocks devoted to language arts, math, social studies, and science on alternating mornings.

The afternoon curriculum emphasizes practical subjects. Some students, who are taking Child Care, work in the local Head Start Program and read about child development. Other students, who are taking Subsistence Living, learn local hunting lore and hunting skills.

On Fridays, the school reverts to a conventional schedule so that students can be tested. To ensure that students master the

skills and knowledge necessary for graduation, the principal matches the learning activities for each project with the district's learning objectives.

Tundra High resembles a small private progressive school. Teachers push students to draw relationships and step beyond the immediate to the abstract. The curriculum is rooted in the life of the community. Learning activities generate products and skills valued by students' parents. At the same time, the school sponsors travel programs to New York City and a student exchange with an Alaskan city. In this small high school, Yupik students experience life outside their isolated village.

Highlands High School
(9 students, 1 full- and 1 part-time teacher)

The staff and community at our second site made a very different decision about the emphasis of the school. The majority of the community have graduated from high school, and English is the everyday language. This community wants students prepared for college.

With college success the highest priority, the teacher and his wife (who teaches part-time) have devised a curriculum of rotating courses. All courses required for college are offered at least once during the students' four years. All students take American History during the same year, for example, but assignments are individualized to match each student's abilities.

Since Highlands High didn't have enough students to field a basketball team, the teachers organized an activity better suited to the small size of the school—a cross-country ski team. The team travels to ski meets at other rural and urban schools and once competed in New York. This travel exposes students to the world beyond the tiny settlement of Highlands.

Despite the small size of the school, achievement test scores are relatively high. Student scores range between the 21st and the 86th percentiles. Several graduates are currently enrolled in college.

Riverside High School
(47 students, 5 teachers)

Riverside, the site of an early church school, is a busy, sophisticated community. All five of the local advisory school board members attended some college. Riverside graduates have a history of college attendance and considerable college success. Parents expect their children to do well at school, and they back up teachers who demand homework, research reports, and good classroom behavior.

Enrolling almost 50 students, Riverside looks much like a traditional high school. Students change classes. The day is divided into seven 45-minute periods. In most classes, the teachers instruct a dozen or more students.

Riverside emphasizes preparation for college. Students in English read Shakespearean plays and produce a term paper replete with footnotes and a bibliography. Extracurricular activities take a back seat to academics. Recently, when insufficient funds threatened teaching positions, the principal took the political risk of shifting funds out of athletic travel to maintain the academic program.

While the curriculum and organization of the school do not depart radically from the large high school model, the personal relationships teachers have with their students do. Teachers know the students and their families well. A student cannot hide in the crowd; there is no crowd in which to hide.

Profiles of Schools That Are Not Working

Not all the schools we visited displayed the energetic and innovative teachers, community-school partnerships, and focused educational programs described in the portraits above. Some schools were depressing places—plagued by class-cutting and attendance problems, staffed by apathetic teachers sending an unending march of worksheets across students' desks, assailed by hostile community members, and absorbed in district politics. Below, we describe such a school.

Fisherton High School
(7 students, 1 teacher)

A fishing village on a major river, Fisherton is plagued by alcoholism, unemployment, and a high school that pleases no one. Teachers find the community apathetic about the school and typically leave after one year. Community residents find the teachers distant and willing to let students get by with little or no work.

The frequent turnover in teachers has prevented the development of a systematic academic program. Students do worksheets and textbook assignments by themselves most of the school day. While not openly hostile, student-teacher interactions are curiously flat. Everyone just seems to be going through the motions of schooling.

The district office has contributed to the problem by hiring teachers whose first loyalty is owed to the district office, a pattern common throughout this particular district. The superintendent has carried this to the point of recruiting principals and principal-teachers who hail from his home state. While a vocal advocate of local control, the superintendent allows teachers and their advisory school committees little latitude on critical educational issues.

The Negative Culture of Schools That Are Not Working

Why do situations such as that in Fisherton develop? Students and parents blame the teachers who "don't care, just come for the money, and have low expectations." Teachers blame the students, or more often, the parents, who "don't care about their kids, don't get them to bed on time, and don't encourage them to do well in school."

Such finger-pointing is not an explanation. For different reasons, a negative culture develops in these schools and becomes self-perpetuating. New teachers meet suspicion or even hostility from the community. Experienced teachers often avoid communities that the teacher network has labeled "difficult." Students tease and test teachers, who quickly lose both their commitment and confidence. A committed, enterprising staff working with the community could change this culture—but not easily.

Finding 4: The size of the high school *does not* determine the quality of the student's educational experience. Other school characteristics are far more important.

Our fieldwork showed that some very small schools, even those with fewer than ten students, provide a high quality education, while some much larger schools, those with 40 to 100 students, do not.

Achievement test scores tell the same story. The larger rural high schools, enrolling 40 to 100 students, show a distribution of test scores no different from those serving smaller numbers of students.

It is not size but other conditions that distinguish the small high schools that are working from those that are in trouble. In small high schools that are working well:

1. The community and school have forged an educational partnership and support each other.

2. The school has developed some clear focus that unifies and gives purpose to the educational program. This focus (or theme) might be language development, college preparation, cultural maintenance, or leadership development.

3. The school staff consists of enterprising educators who are not hide-bound to a single image of what a high school looks like and who can design a program fitted to a particular situation.

4. The school staff has the broad intellectual range and broad interests (such as dog mushing, taxidermy, writing, art, music, house building, flying a plane) that add variation to the program.

5. The school is in a district where the central office administrators encourage local professionals to consult with the community and to fit the instructional program to community priorities.

STUDY FINDINGS, PART III:
Problems Exist . . . But So Do Solutions

Small rural high schools in Alaska face difficult problems due to the sheer weight of expectations placed on them. Schools are expected to offer sound academic programs *and* recreation for the students *and* community services for adults. Schools are expected to prepare students for wage employment, for college, for the world beyond the community *and*, at the same time, inculcate traditional skills and values.

We discuss below the educational problems that rural residents and educators see in small high schools. We also describe the strategies some small high schools are using to solve these problems.

Problem Area 1: Limited Numbers of Teachers, Courses, and Extracurricular Activities

The Issue

While Alaska's small high schools offer a basic academic curriculum and some activities, many community people want more course variety and more extracurricular activities. Fewer than half the schools, for example, offer separate courses in art and music or such advanced courses as physics and trigonometry.

About half the teachers in small high schools are teaching outside their fields. Some have a broad education and can teach such subjects well. Others cannot. Rural college students, who find

themselves unprepared for college level work, are especially concerned when high school teachers "teach subjects they don't know about."

Strategies for Increasing Course and Teacher Variety

Contrary to those who advocate a high technology solution to the problem of limited curriculum in small schools, we found that schools tend to address this problem with people-intensive rather than technology-intensive solutions. We did not find extensive use of such existing technologies as instructional television and audioconferencing. Schools do use microcomputers a great deal, most often for word-processing and drill, rather than as a means to deliver coursework without an on-site instructor.

While this does not preclude the wider use of communications technology in the future, a great deal more thought needs to be given to integrating technology with instructional practices. Assuming that teachers will use available technology has been the downfall of more than one innovative curriculum program.[13]

Small high schools have developed many types of people-intensive and experience-intensive strategies to expand their curriculum. In Exhibit A, we list a few examples.

Problem Area 2: Providing Vocational Education

The Issue

Vocational education, in the eyes of both community people and rural educators, is the ***single weakest area*** of small high schools. Difficulties in providing effective vocational programs in small high schools extend beyond the lack of specialized vocational education teachers and essential equipment. Even figuring

[13]See Paul Berman and Milbrey W. McLaughlin, *Federal Programs Supporting Educational Change, Vol. III: Implementing and Sustaining Innovations.* Report to the U.S. Office of Education (Santa Monica, Calif.: Rand Corporation, 1978).

EXHIBIT A
STRATEGIES TO INCREASE COURSE AND TEACHER VARIETY
(A Few Examples)

- **Innovative staffing.** Some schools use part-time instructors from the local community to teach both academic subjects and local skills. Elementary teachers with academic specialties teach their subject at the high school level in other schools. Other staffing innovations include use of itinerant teachers, artists-in-residence, and specialists from urban areas employed on short contracts.

- **Curriculum and organizational innovations,** such as rotation of courses, community-based projects, block scheduling, and shift scheduling.

- **Summer camps** and other summer programs.

- **Link-ups with other institutions,** such as university programs, Native organizations, larger rural schools, and urban partner schools.

- **Travel programs** to other rural communities, urban areas, and places outside Alaska.

out what vocational education should offer students is problematic.

No consensus exists on the objectives of "vocational programs," either at a national level or in rural Alaska. Indeed, many national reports argue that the best vocational education is an academic education; specific job-training should be postponed to post-secondary training.[14]

When people talk about the "vocational education problem," they do not adequately distinguish between vocational programs; different programs can have quite different purposes:

Purpose of Vocational Program	Can a Small High School Do This?
Provide work-experience and career exploration.	Yes. Usually a school can make arrangements in the community or outside it.
Teach practical local skills, such as small engine or diesel repair.	Yes. Small high schools, which can draw on local crafts people, are especially well-suited to teaching these skills.
Prepare students for specific jobs through specialized training programs.	Not usually. Exceptions are office occupations or jobs where local practical skills, like small engine repair, are in reality entry-level skills.

Strategies for Providing Vocational Education

As shown in Exhibit B, small high schools can provide vocational education through a variety of strategies.

[14]See, for example, the discussion in Boyer, *High School: A Report on Secondary Education in America*, pp. 121-130.

EXHIBIT B
STRATEGIES FOR PROVIDING VOCATIONAL EDUCATION
(A Few Examples)

- **Work experience programs** in which students work at the school, at supervised jobs in the community, in Native corporations during the summer, or in urban work sites through the Rural Student Vocational Program.

- **Starting a small business enterprise in the community.** Students learn to produce and price a product, order raw materials and supplies, and do the bookkeeping. Students in small high schools have started such enterprises as a student store, a storyknife business, a snack bar, and a bakery.

- **Setting up a repair shop** where students work on three-wheelers, outboard motors, and other equipment for community residents.

- **Sending students to a central vocational facility** for two-week courses.

- **Using itinerant vocational education instructors** who stay at the school for a few weeks at a time.

- **Using part-time local people** to teach fur-sewing, kuspuk making, boat and engine repair, and other practical skills.

Problem Area 3: College Preparation

The Issue

Neither the small rural high schools nor the boarding schools that preceded them have succeeded in preparing students well for college. Most rural students who enroll in college do not graduate.

Those most dissatisfied with the small high schools are rural college students who find that their secondary education is inadequate preparation for college.

Yet, none of our evidence demonstrates that small high schools prepare students for college any better or any worse than did the boarding schools. Drop-out statistics from the University of Alaska show students from village high schools doing about as well as students from larger rural high schools or from boarding schools.

Most people, including rural college students, believe high college drop-out rates result from two problems. First, many rural students feel their high school teachers have not adequately taught them the academic skills needed for college success—for example, taking notes in a lecture, writing a research paper, or reading and comprehending college material.

Second, many rural students have difficulty adjusting to the stress and the impersonal relationships they encounter at college. Most do not flunk out of college; they leave voluntarily because they do not feel comfortable in the college setting.

Strategies to Prepare Students for College

College Preparation Classes. Some high schools have established special classes to get students ready for college. These classes teach students explicitly how to study, write research papers, take notes, or read and understand complicated technical material.

The Rural Alaska Honors Institute. This program brings academically talented juniors from small high schools to the

Fairbanks campus of the University of Alaska (UAF). In addition to improving their academic skills, students are immersed in experiences they will face in university courses—discussing their ideas before a group or dealing with the pressure of a term paper and an exam on the same day. Of the thirteen students who enrolled at UAF after the program's first year, all completed their first semester and twelve returned for the second semester.

Problem Area 4: Low Achievement Test Scores

The Issue

Most rural high school students score far below the national average on standardized tests (Figure 5).

Small high schools did *not* create this problem. Rural students also scored very poorly on standardized tests when they went away to boarding schools. In 1974, for example, when Mt. Edgecumbe had replaced its highly selective enrollment policy of the 1950s and 60s with an open admission policy, high school seniors graduated with achievement test scores below the ninth grade level.

A number of factors that have nothing to do with instruction in school combine to keep the achievement test scores of many rural Native students low: language background, the urban context of many test items, and social traditions that do not emphasize academic skills.

We do *not* know what effects small high schools have had on rural students' achievement test scores—whether positive, negative, or neutral. No comparative statistics are available. Those who argue that the agreement of settlement in *Tobeluk v. Lind* has "produced the world's most expensive high schools and the most poorly educated high school students"[15] should be aware that current data support neither this nor any other definitive conclusions.

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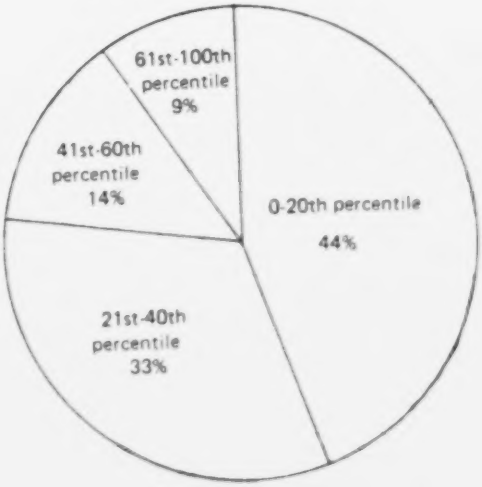
[15]Thelma Buchholdt, Proposed Interim work of the HESS Committee (Alaska State House of Representatives), memorandum dated April 10, 1979.

Figure 5

Students in Rural High Schools

Have Low Achievement Test Scores

Percentage of Entire 9th-12th Grades
at Different Percentile Rankings*



Total Number of Grades Represented: 522

*Please keep in mind that these figures represent average achievement test scores for the whole grade, not scores for individual students.

Source: ISER Small High School Study, 1984.

Strategies to Raise Achievement Test Scores

Many rural school districts are devoting considerable effort to raising standardized test scores. Such efforts usually originate in the central office. Various districts have:

- Offered monetary incentives to teachers who raise test scores.
- Examined the fit between their curriculum and test items.
- Taught students test-taking skills.
- Monitored weekly lesson plans to insure that teaching reflects test content.

Many teachers, however, tend to be unenthusiastic about what they see as an overemphasis on test scores. Others endorse this priority and develop community support for improving test scores. In one community, for example, the principal teacher persuaded parents to postpone the annual spring festivity until after the test, send students to bed early before the tests, and even come to the school to cook a special breakfast on the day of testing.

The success of these various strategies is difficult to determine. Using yearly changes in test scores to measure changes in student learning in small schools is problematic at best—a fact some educators fail to appreciate. In a class of five students, the absence of one bright student, for example, can lower the class average dramatically.

To obtain a better measure of change in student learning, some schools are using criterion-referenced tests to more accurately gauge the effectiveness of instruction. These tests are designed to measure student learning of the specific knowledge and skills taught in the school curriculum rather than the more general knowledge and skills measured by standardized achievement tests.

Problem Area 5: Helping Rural Students Become Competent in the World Outside the Village

The Issue

Residents of contemporary rural Alaska need the skills and confidence to handle urban life, whether they choose to remain in their home communities or live in urban areas. Rural adults frequently travel to towns and cities to work, receive training, attend meetings, go to school, enter the hospital, take a vacation, etc.

In remote, culturally different communities, educators worry about their students' social isolation. Unfamiliarity with the mechanics of urban life—pedestrian and stop lights, pay telephones, the bus system, etc.—are but one aspect of this concern. More importantly, students are unprepared for the social organization of urban life. They are not equipped to deal with such things as impersonal interactions with other people and the loneliness of facing the stresses of daily life without the immediate support of family and friends.

Strategies to Teach Students About the Outside World

Most small high schools offer travel programs to increase students' competence in the outside world. Almost 90 percent of the small high schools sponsor student trips to Alaska cities, and 40 percent send students to other states or foreign countries. In fact, students in some schools travel so often that many teachers worry that travel is undermining the academic program.

Is this travel educationally worthwhile? One rural district carefully evaluated the various types of travel it sponsored: athletic trips to other rural schools, class trips to cities, and individual student trips through state programs.[16] The district concluded that the *most educationally effective form of travel is*

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[16]Virginia Juettner, *The Iditarod Area School District Program Evaluation 1979-1980* (McGrath, 1980).

the class trip, because teachers can plan academic activities for the whole class around them. Such trips increase rural students' self-confidence, their concepts and skills, their interest in visiting new places, and their understanding of how to behave in unfamiliar settings.

Problem Area 6: The Transition to Adulthood

The Issue

During high school, rural students receive a great deal of nurturing and support from teachers who know them well. After high school, students are—suddenly—on their own. As one experienced rural educator said:

> This generation is floating. Students in these small high schools don't have any clear idea of how they are going to make a living. They have no vision of the future. They didn't need one a generation ago. But now people in their twenties and thirties are just sitting at home, bored to tears. They don't like themselves.

Transition to adulthood is a difficult period for *all* students, urban and rural. Urban students, however, are more likely to have certain advantages—an uncle or family friend who can get them a job in a friend's construction business, a parent who knows how to get them out of mischievous trouble, or an established work record from weekend or after-school jobs. Rural students rarely have such resources.

Strategies to Help Rural Students Through the Transition to Adulthood

One Alaska school district has developed an exceptionally promising approach to helping rural students make the transition to adulthood: the *postsecondary counselor*. This counselor, located in the district office, takes responsibility for students when they are about to graduate. The counselor not only helps

them get into postsecondary programs but also stays in touch with them and helps them through rough spots. For example, the counselor keeps duplicates of important documents that may get lost. He takes midnight telephone calls announcing crises and shows students how to negotiate the urban, institutional world.

Of the 154 graduates from this district who had enrolled in postsecondary programs, only 15 percent dropped out.

CONCLUSION

Most of the community people and rural school board presidents we interviewed had personal experience with both the former boarding school system and the current village high schools. They support the village high schools and do not want to lose them.

At the same time, they want choice—a boarding option. Some students need to leave the community for personal reasons, while others need an advanced program not offered by their particular high school.

Rural educators agree. They also favor small schools *and* a boarding option. In their view, small high schools can provide a high quality education. Many are in fact doing it. These schools have enterprising teachers who have forged an educational partnership with the community. Using tutorials, travel programs, computers, community projects, business enterprises, etc., they offer a high quality education fitted to the situation.

These educators do not model their program on the comprehensive high school. Rather than fighting smallness, they use it to advantage.

Not all small high schools, however, offer students good educational experiences. Some teachers have organized a program totally dependent on textbooks and worksheets. Some schools are caught in a quagmire of low expectations and low effort on the part of both the teachers and the community. No one is happy with the situation, but no one has managed to pull the school out of it.

No quick fix exists for these problems. Low achievement test scores, low rates of college success, and unsuccessful transitions to adulthood—all of these problems were with us in the boarding school era and all are still with us in the village high school era.

Yet, one serious problem is no longer with us—high drop-out rates among rural secondary students. The graduation rates of rural high school students now exceed the national average.

Graduation from high school is becoming the new norm in rural communities—an achievement of considerable magnitude not to be lightly dismissed. Research conducted over many decades and across many cultures shows that more years of formal education profoundly influences people's knowledge, values, world view, and child-rearing practices.[17]

Rural communities with high numbers of high school graduates have higher achievement test scores than do villages with lower educational levels. Rural educators and school board presidents alike point out that parents who are high school graduates take a more active interest in their children's education. The greatest impact of the small high schools, we suspect, will be on the next generation—the children of the many rural students who are now graduating from high school.

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[17]See, for example, Alex Inkeles and David H. Smith, *Becoming Modern: Individual Change in Six Developing Countries* (Cambridge, Mass.: Harvard University Press, 1974).